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Dated: May 19, 2004

Signature: \_\_\_\_\_

(Lisa deCordova)

Docket No.: 65948/P057US/10400208  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Re Patent Application of:  
Shimon B. Scherzer et al.

Application No.: 09/727,226

Confirmation No.: 3518

Filed: November 30, 2000

Art Unit: 2681

For: ADAPTIVE ANTENNA ARRAY WIRELESS  
DATA ACCESS POINT

Examiner: D. Q. Nguyen

**RESPONSE TO RESTRICTION REQUIREMENT**

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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MAY 25 2004

Technology Center 2600

Dear Sir:

In response to the restriction requirement set forth in the Office Action mailed April 28, 2004 (Paper No. 8), Applicant hereby provisionally elects the claims of Group II (claims 12-41) for continued examination, with traverse.

The Examiner has required restriction between the claims of Group I (claims 1-11), said to be drawn to a receiver comprising a signal processor and a demodulator, the claims of Group II (claims 12-41), said to be drawn to a beam former and a channel estimator, the claims of Group III (claims 42-54), said to be drawn to a method for determining communication channel attributes, and the claims of Group IV (claims 55-68), said to be drawn to a remote unit comprising a receiver and transmitter. The Restriction Requirement states that the inventions of Groups I-IV are related as combination and subcombination and that the combination as claimed does not require the particulars of the subcombination as claimed because they are classified in different classes and subclasses, see the Restriction Requirement at page 2. Applicant respectfully traverses the restriction and asserts that the reasons set forth in the Restriction Requirement are insufficient to properly require Applicant to elect among the currently pending claims for further prosecution.

In requiring election of claims for further prosecution, the Examiner asserts that the above identified groups are related as combination and subcombination. "A combination is an organization of which a subcombination or element is a part," M.P.E.P. § 806.05(a).

The Examiner has not identified which of the proffered claim groupings are asserted to form a combination and which are asserted to form a subcombination thereof. In particular, the Restriction Requirement appears to treat each of the claim groupings as being subcombinations, see the Restriction Requirement at page 2. In order to establish that the invention of a claim grouping forming a combination and a claim grouping forming a subcombination are distinct, a showing of two-way distinctness is required, as may be shown by the combination not requiring the particulars of the subcombination as claimed for patentability and that the subcombination has utility by itself or in other and different relations, see M.P.E.P. § 806.05(c). However, the Restriction Requirement does not identify any claim grouping as presenting a combination and, therefore, does not establish two-way distinctness with respect to claim groupings forming a subcombination. Accordingly, the Restriction Requirement with respect to each of Groups I-IV is improper and should be withdrawn.

Moreover, the Restriction Requirement states that "the combination as claimed does not require the particulars of the subcombination as claimed because [they] are classified in different classes and subclasses," see the Restriction Requirement at page 2. However, whether or not claims may be classified in different classes and subclasses does not address the question of whether particulars of a subcombination as claimed are required by a combination, which includes the subcombination, for patentability, see M.P.E.P. § 806.05(c). Although a combination may be classified in a different class and subclass with respect to a subcombination thereof, particulars of the subcombination may be relied upon to show novelty and unobviousness with respect to the combination. Accordingly, Applicant respectfully asserts that the showing of distinctness in the Restriction Requirement is insufficient to require election of claims for further prosecution.

Applicant believes that the present claims set forth closely related inventions which are not properly restrictable under Office policy, and further which have been mischaracterized in the Restriction Requirement. For example, independent claim 1 recites an antenna array which transmits M orthogonal renditions of a first signal and a receiver

receiving the M orthogonal renditions of the first signal and processing the signals to derive discrete information from the M orthogonal renditions of the first signal and providing communication channel information. Similarly, independent claim 12 recites an antenna array which transmits M orthogonal renditions of a first signal, signal reception circuitry receiving the M orthogonal renditions of the first signal and providing discrete information with respect thereto, channel estimator circuitry using the discrete information to determine a spatial signature (an example of communication channel information), and beam forming circuitry providing beam forming as a function of the spatial signature. Independent claim 42 recites a method in which M orthogonal renditions of a first signal are provided to an antenna array, M orthogonal renditions of the first signal are received, information with respect to the M orthogonal renditions received is determined, and a spatial signature (an example of communication channel information) is estimated using the determined information. Independent claim 55 recites a base station including an antenna array transmitting M orthogonal sub-pilot signals and a beam former providing beam forming in response to spatial channel information (an example of communication channel information) derived from reception of the M orthogonal sub-pilot signals, and a remote unit including a signal receiver receiving the M orthogonal sub-pilot signals and deriving the spatial channel information and a transmitter providing the spatial channel information to the base station for use by the beam former.

Although the preambles of the foregoing independent claims may set forth intended uses in various language, it is believe that this preambular language is not given patentable weight by the Office, see M.P.E.P. § 2111.02. In light of the recited elements of these claims being so closely related, as summarized above, and reciting limitations which, although varying in scope, are believed by Applicant not to present a burden on the Office to properly search and examine in the same application, Applicant believes that restriction between the pending claims should not be required. Accordingly, Applicant respectfully requests that the Examiner proceed with examination on the merits with respect to claims 1-64.

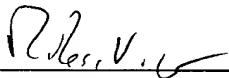
Application No.: 09/727,226

Docket No.: 65948/P057US/10400208

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2380, under Order No. 65948/P057US/10400208 from which the undersigned is authorized to draw.

Dated: May 19, 2004

Respectfully submitted,

By 

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05-20-04

2681  
#9 JES  
05/20/04

<b>AMENDMENT TRANSMITTAL LETTER</b>			Docket No. 65948/P057US/10400208
Application No. 09/727,226	Filing Date November 30, 2000	Examiner D. Q. Nguyen	Art Unit 2681

Applicant(s): Shimon B. Scherzer et al.

Invention: ADAPTIVE ANTENNA ARRAY WIRELESS DATA ACCESS POINT

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**TO THE COMMISSIONER FOR PATENTS**

MAY 25 2004

Transmitted herewith is an amendment in the above-identified application.

The fee has been calculated and is transmitted as shown below.

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CLAIMS AS AMENDED					
	Claims Remaining After Amendment	Highest Number Previously Paid	Number Extra Claims Present	Rate	
Total Claims	64	- 64 =		x	0.00
Independent Claims	4	- 4 =		x	0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					
Other fee (please specify):					
<b>TOTAL ADDITIONAL FEE FOR THIS AMENDMENT:</b>					0.00

- ☒ Large Entity ☐ Small Entity
- ☒ No additional fee is required for this amendment.
- ☐ Please charge Deposit Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_.  
A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of \$ \_\_\_\_\_ to cover the filing fee is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. 06-2380 as described below. A duplicate copy of this sheet is enclosed.
- ☒ Credit any overpayment.
- ☒ Charge any additional filing or application processing fees required under 37 CFR 1.16 and 1.17.

R. Ross Viguet  
Attorney Reg. No.: 42,203

Dated: May 19, 2004

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<b>Amendment Transmittal</b>	
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